

MAX J. KUNEY COMPANY

120 N Ralph Spokane WA 99202-4744
PO Box 4008 Spokane WA 99220-0008
Phone: (509) 535-0651 Fax: (509) 534-6828

Submittal Transmittal

To:

Will Smith, P.E.
WSDOT
PO Box 12560
Yakima WA 98909-2560

Copy to: Jobsite 80

Date	4/20/10	80-KLB-001r1
Attention	Will Smith	
Regarding	I-90 Hyak to Snowshed Vicinity	
Contract No.	7852	
F.A.P. No.	State Project	

WE ARE SENDING THE FOLLOWING ITEMS BY: ☐ US MAIL ☐ FAX ☐ HAND DELIVERED ☐ E-MAIL ☐ FED-X
☐ DRAWINGS ☐ PRINTS ☐ PLAN ☐ SAMPLES ☐ SPECIFICATIONS
☐ COPY OF LETTER ☐ CHANGE ORDER

COPIES	DATE	NUMBER	DESCRIPTION
			KLB Construction - Revision to Blasting Plan Submittal *ADD# 1 – to Blast Plan FOR APPROVAL

THESE ARE TRANSMITTED as checked below:

- ☐ For approval
- ☐ For your use
- ☐ Approved as submitted
- ☐ Approved as noted
- ☐ Returned for corrections
- ☐ Resubmit ____ copies for approval
- ☐ Submit ____ copies for distribution
- ☐ Return ____ corrected prints
- ☐ For review and comment
- ☐ Prints returned after loan to us
- ☐ As requested

REMARKS

SIGNED:

Kelly Griffith - Project Manager

Cinda McCain

From: Aiesh Ragih [AieshR@klbconstruction.com]
Sent: Saturday, April 17, 2010 6:45 AM
To: Kelly Griffith; Cinda McCain
Cc: Mike Jacobs
Subject: Fw: Phase 1B - Blasting Plan Submittal
Attachments: blasting_diagrams.pdf

Cinda

Please forward to the DOT this correction, not sure if Mike sent this email

Thanks

----- Original Message -----

From: Danny Sanders <danny@blastwest.com>
To: Danny Sanders <danny@blastwest.com>; Joe Grady
Cc: Aiesh Ragih; James Bosa; Bill Grady; Charley Murphy <murphystgeorge@aol.com>; Vic Bronson <blastervic@gmail.com>; Colton <sanders.colt@gmail.com>; Michael Lee <michael@blastwest.com>; Mike Jacobs; Wade Hutchison <wade@vceinc.com>
Sent: Wed Apr 14 11:06:39 2010
Subject: RE: Phase 1B - Blasting Plan Submittal

Aiesh,

We found a labeling error on one page. The 5 inch hole should have been labeled production hole and not trim hole. We have made the correction on these attached forms. I hope this hasn't caused any inconvenience.

Danny

From: Danny Sanders
Sent: Tuesday, April 13, 2010 2:58 PM
To: 'Joe Grady'
Cc: Aiesh Ragih; James Bosa; 'Bill Grady'; Charley Murphy; Vic Bronson; Colton; Michael Lee; Mike Jacobs; 'Wade Hutchison'
Subject: RE: Phase 1B - Blasting Plan Submittal

Aiesh,

The attachment should answer the questions below. Please let me know if you need more information. We did not include in our scope of work monitoring for the soil nails or rock bolts. You may want to contact Wade to do that or perhaps the consulting firm that is monitoring the overall slope movement. There is a condition to do a pre-blast inspection on the job. Usually this occurs on near-by structures. As the highway will be completely refinished after the blasting is finished it would be counterproductive to do a pre-blast survey on it. Is there anything else in the area that would require a pre-blast survey? Please advise.

Thanks,

Danny Sanders

From: Joe Grady [<mailto:JoeG@klbconstruction.com>]
Sent: Wednesday, March 24, 2010 8:57 AM
To: Danny Sanders
Cc: Aiesh Ragih; James Bosa
Subject: FW: Phase 1B - Blasting Plan Submittal

Danny,

Please address and respond in writing. If needed site the spec and match with the requirement. Thanks Joe

From: Kelly Griffith [<mailto:kelly@maxkuney.com>]
Sent: Wednesday, March 24, 2010 7:26 AM
To: Joe Grady
Subject: Fw: Phase 1B - Blasting Plan Submittal

Sent from my Verizon Wireless BlackBerry

From: "Wood, Jerry" <WoodJe@wsdot.wa.gov>

Date: Wed, 24 Mar 2010 07:05:48 -0700

To: Kelly Griffith<kelly@maxkuney.com>

Cc: Hooker, Bob<HookerB@wsdot.wa.gov>; Harris, John<HarrisJ@wsdot.wa.gov>; Smith, Will<SmithW@wsdot.wa.gov>

Subject: FW: Phase 1B - Blasting Plan Submittal

Kelly,

Can you please answer Steve's questions below?

Please let me know if you have questions.

Thanks,

Jerry Wood

Office (509) 577-1859

Cell (509) 930-0296

From: Lowell, Steve
Sent: Tuesday, March 23, 2010 4:15 PM
To: Wood, Jerry
Subject: RE: Phase 1B - Blasting Plan Submittal

Jerry - I have just begun to look at this blasting submittal and I have a few basis questions as it relates to Western state's consultants. Who is the designated blasting consultant, and who is the blast vibration consultant. Reading through the material that was submitted it is not clear to me. Please clarify. Thanks Steve.

Steve Lowell, L.G., L.E.G.

Chief Engineering Geologist

Engineering Geology Section Manager

WSDOT Geotechnical Division

(360) 709-5460 (Office), (360) 561-9036 (Cell)

(360) 709-5585 (Fax)

PO Box 47365, Olympia, WA 98504-7365 (mail)

1655 South 2nd Avenue, Tumwater, WA. 98512

lowells@wsdot.wa.gov <<mailto:lowells@wsdot.wa.gov>>

From: Wood, Jerry
Sent: Monday, March 22, 2010 2:30 PM
To: Lowell, Steve
Cc: Smith, Will; Hooker, Bob; Harris, John; Schut, Brad; Hawkins, Robert; Anderson, Doug; Badger, Tom C
Subject: Phase 1B - Blasting Plan Submittal

Hi Steve,

Please see the following for review of Western States Blasting Plan for the Phase 1B project.

An electronic version of the plan can be found at the link below:

W:\Public\DOT\Phase 1B - Blasting Plan Submittal <<file:///\\wsdot.loc\scdfs00\Corporate\Public\DOT\Phase%201B%20->

%20Blasting%20Plan%20Submittal>

A hardcopy will be sent to you as well.

Please let me know if you have questions.

Thanks,

Jerry Wood

Office (509) 577-1859

Cell (509) 930-0296

Note:

This message is transmitted for the exclusive use of the above-named addressee. It may contain privileged information protected by law. If you are not the intended recipient of this transmission, please do not review, forward, copy, print, or otherwise disseminate it. Please also notify me of your receipt hereof by reply e-mail and permanently delete this message and any attachments hereto from any and all computers or storage devices where it may exist. Thank you.

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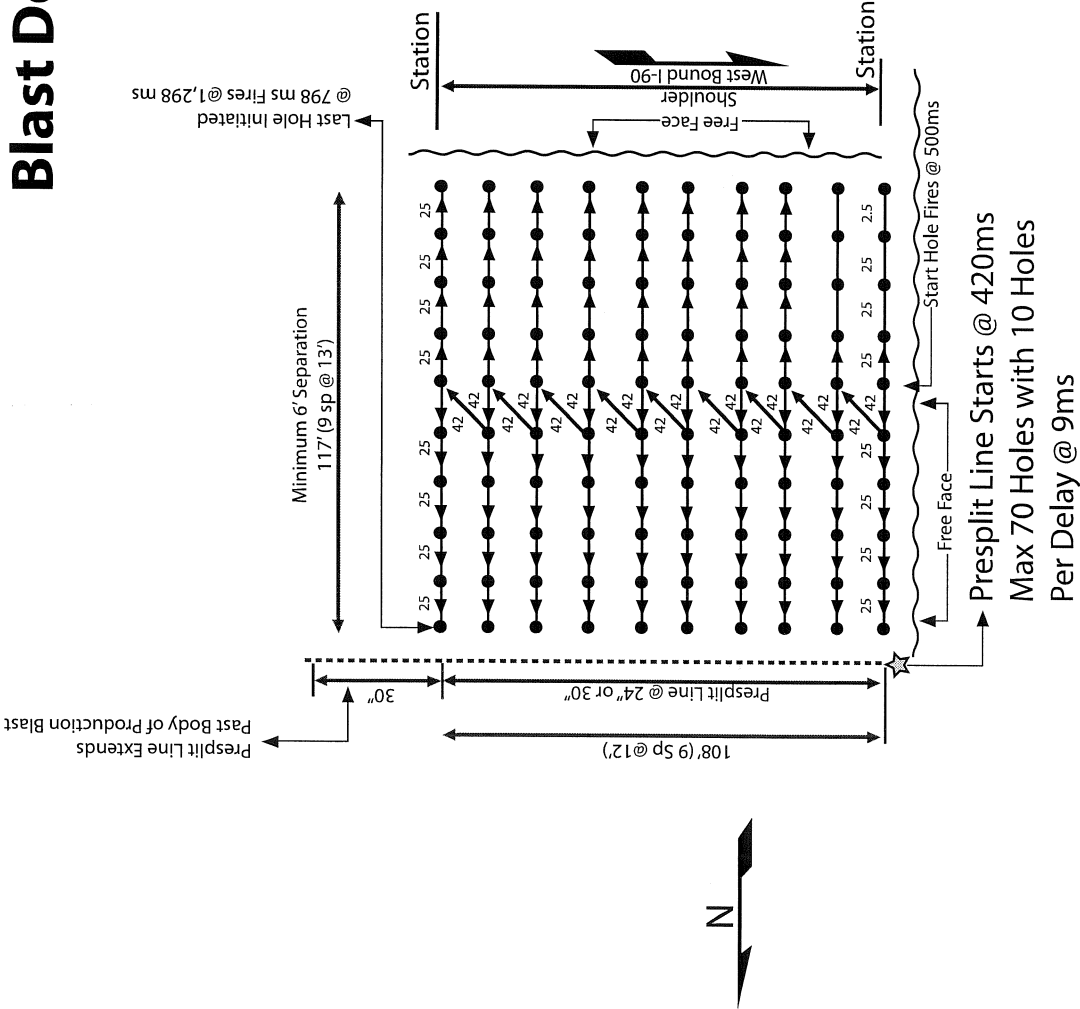
ADDENDUM #1 TO BLAST PLAN

1. Spacing between presplit holes shall be 30" center to center or 24" center to center as specified and aligned so that deviation from plane of finished face is not more than 9".
2. Production blast holes shall not be closer than six (6) feet from presplit line and may be of reduced diameter to minimize backbreak.
3. Specific requirements of standard spec. 2-03.3(2) are thought to be covered in diagrams depicting theoretical blast plans #1 thru #3 as attached.
4. Highway closures shall be limited and managed by designing each blast based on shot to shot conditions. Primary considerations will be:
 - Careful and accurate measurement and control of burden, spacing, stemming and timing of each borehole.
 - Blast designs which minimize movement of shot rock laterally toward I-90 as illustrated in theoretical blast designs 1 thru 3 (attached).
 - Occurrence of misfires/hang fires due to equipment or product malfunction will be investigated and dealt with as appropriate to minimize delays.
 - Road clearing equipment and allocations will be as follows:
 - ◆ Caterpillar 980 loader
 - ◆ Komatsu 400 excavator
 - ◆ Komatsu 600 excavator
 - Equipment and operators will be pre-positioned at the east and west limits of the blast area set to move any debris as soon as all clear signal is sounded by blaster in charge.
5. Blast area will be secured for a distance of 1500 feet from the closest borehole by placing responsible individuals at appropriate points on all roads (USFS) and public), defined trails and in view of all waterways with public access within the designated blast area. Each observer/guard, will be authorized to call "STOP-STOP-STOP" over a clear channel communications system to the Blaster in Charge if personnel or critical equipment is observed within the designated blast area. Upon receiving the "STOP-STOP-STOP" order countdown will be suspended and firing system disarmed until safety issues are resolved.
6. Blast effects shall be monitored using two recently calibrated

seismographs capable of measuring three mutually perpendicular components of vibration and peak air blast overpressure. Seismographs will be operated by personnel trained and certified by VCE Inc., 2604 Foster Ave., Nashville, TN 37210. Telephone 615-781-3844. Contact Wade Hutchinson, P.E. Seismographs will be located at project boundaries located at the east and west ends alongside I-90 westbound interstate highway. Daily reports will be provided to the project engineer by the certified vibration technician thru the blaster in charge. Specific seismograph data including serial numbers and recent calibration dates will be provided with each report.

7. All blasts shall be recorded from two viewpoints using portable digital cameras. Recording shall be forwarded to the project engineer daily.

Blast Design 1



Proposed Blast Design for

First blast @ each Station adjacent to I-90

Presplit Powder: 1" Diameter detagel (or equivalent)

Production Explosives: Emulsion/ANFO 80/20 blend

Detonators: 40' Handidet (or equivalent) 25/500ms

Stemming: Screened angular aggregate less than 1/8"

Design Powder Factor: 1.14lbs. per cubic yards

Theoretical Hinge Point

1/4 to 1 Presplit face from previous blast

Possible helper hole of reduced diameter

Face Holes Custom Load Based on Local Condition

5" diameter x 26' Deep Holes with 10' Stem for Test shot

Minimum 6' separation between blast hole and presplit line (hole size and spacing may be adjusted to minimize damage)

Typical 2' Offset Line

Final Grade

Theoretical Free Face

Cross Section (theoretical)

Notes:

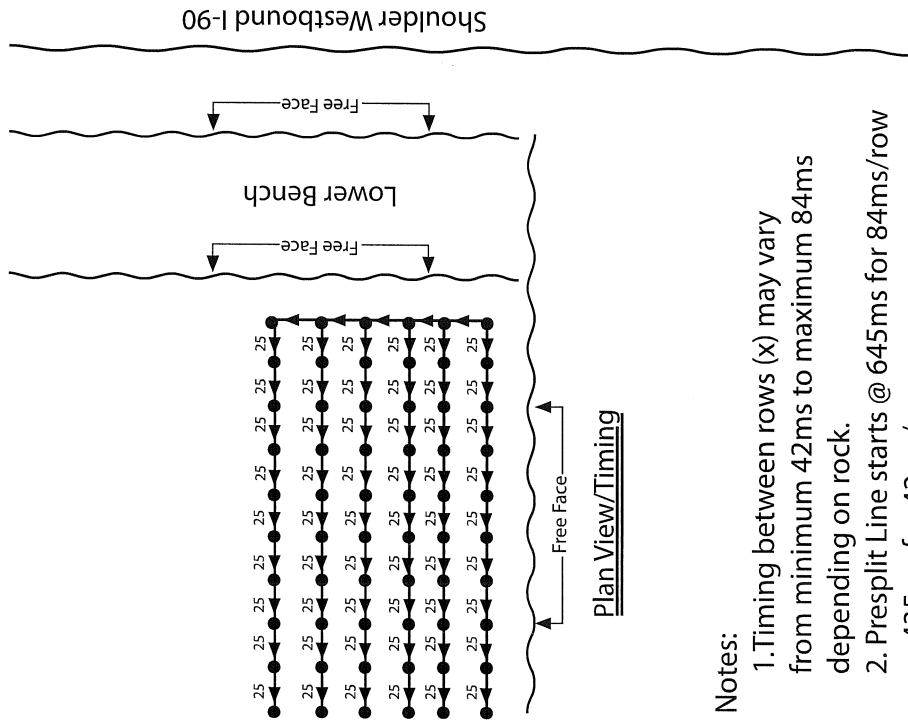
1. This blast design will be used for the initial test shot and may be modified for subsequent blasts.
2. Primary rock movement will be parallel to I-90 with minimal vertical and lateral projection.
3. Powder factor 1.14#/yd.

Last Hole Fires @ 463ms
i.e. 27ms Before First Production Hole and 335ms Before Last Hole is ignited.

Plan View/Timing (theoretical)

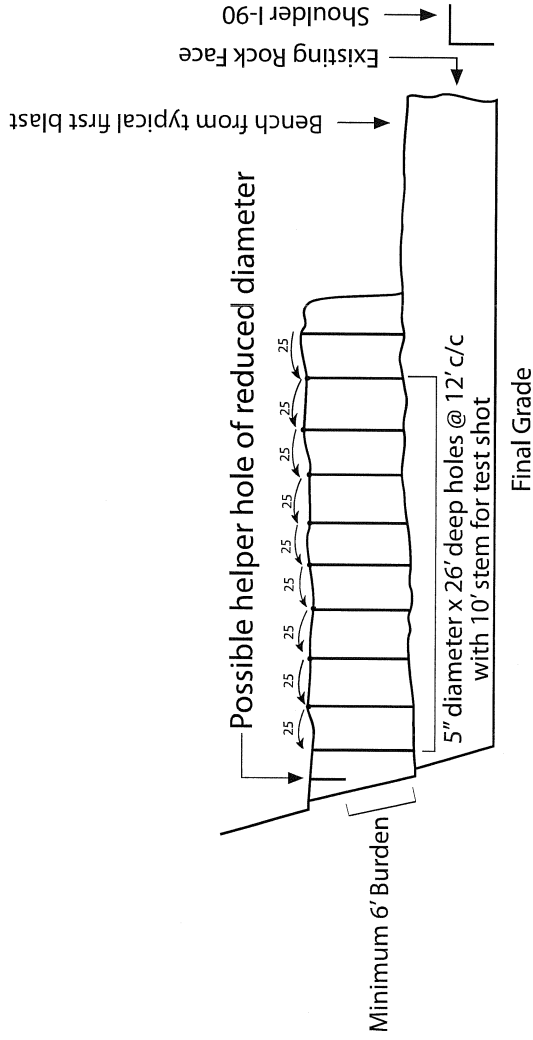
Blast Design 2

Presplit Line 24" or 30" sp High Wall

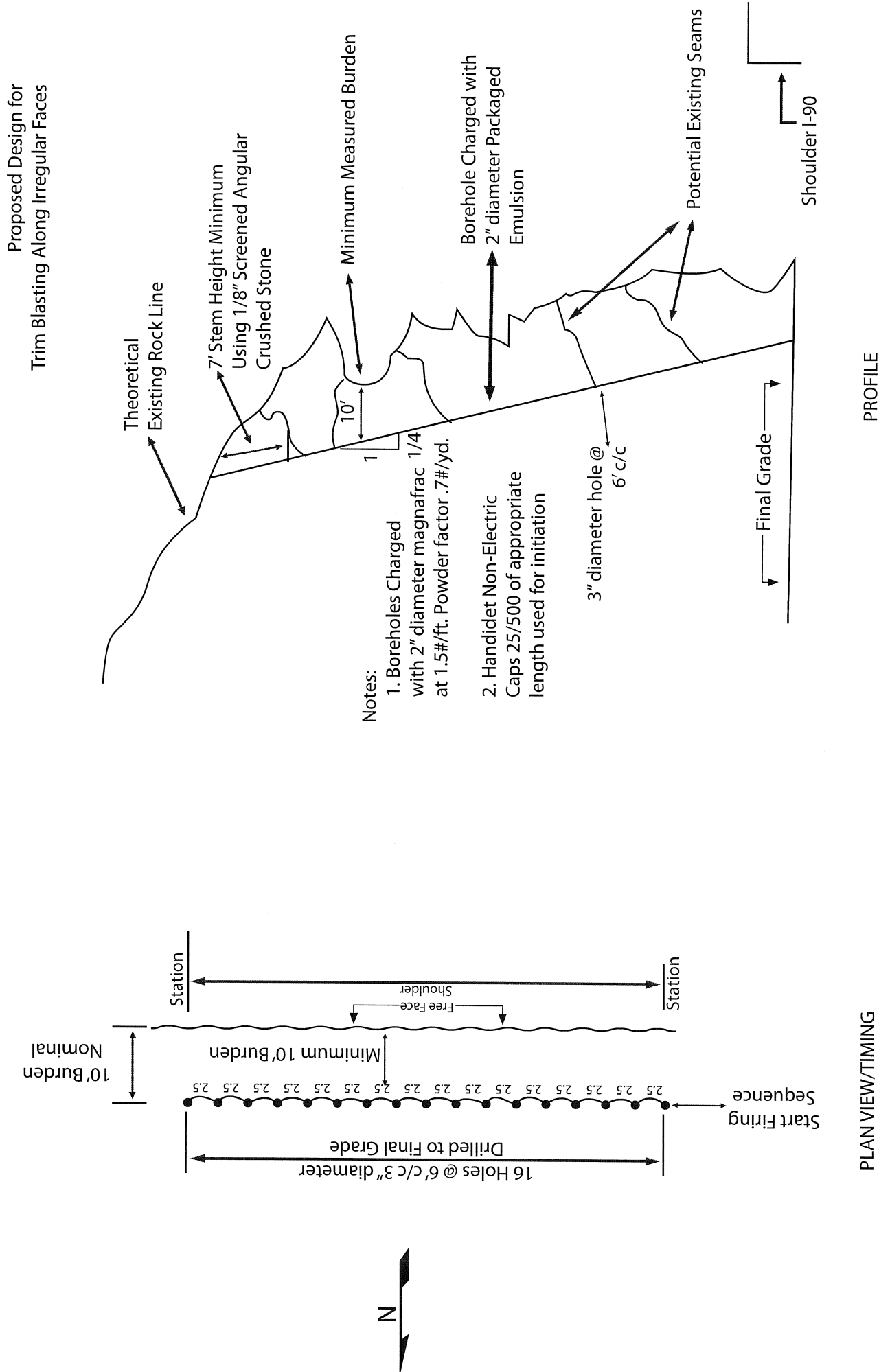


Notes:

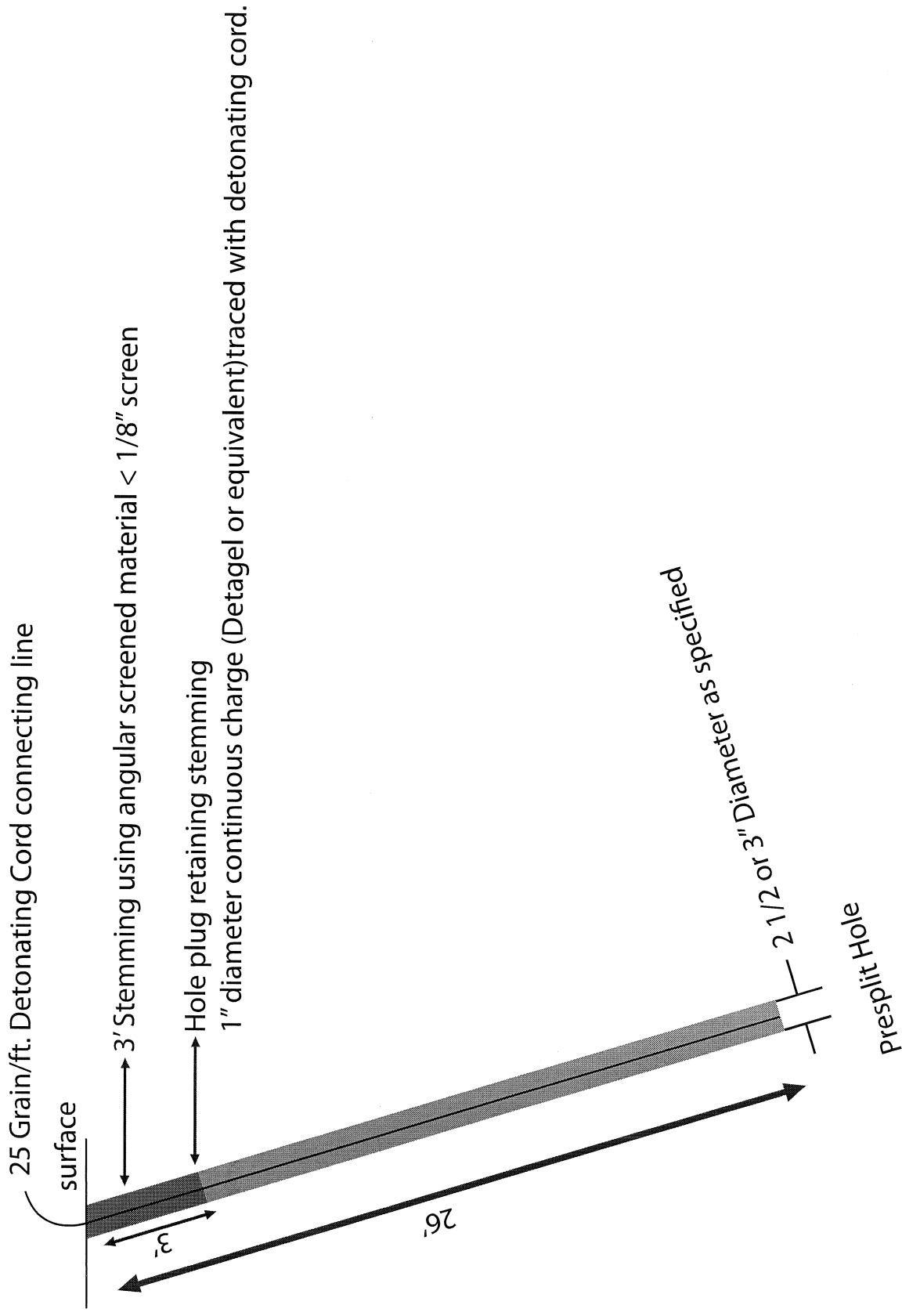
1. Timing between rows (x) may vary from minimum 42ms to maximum 84ms depending on rock.
2. Presplit Line starts @ 645ms for 84ms/row or 435ms for 42ms/row.
3. This blast design may be used for areas where distance from I-90 westbound allow some lateral projection.



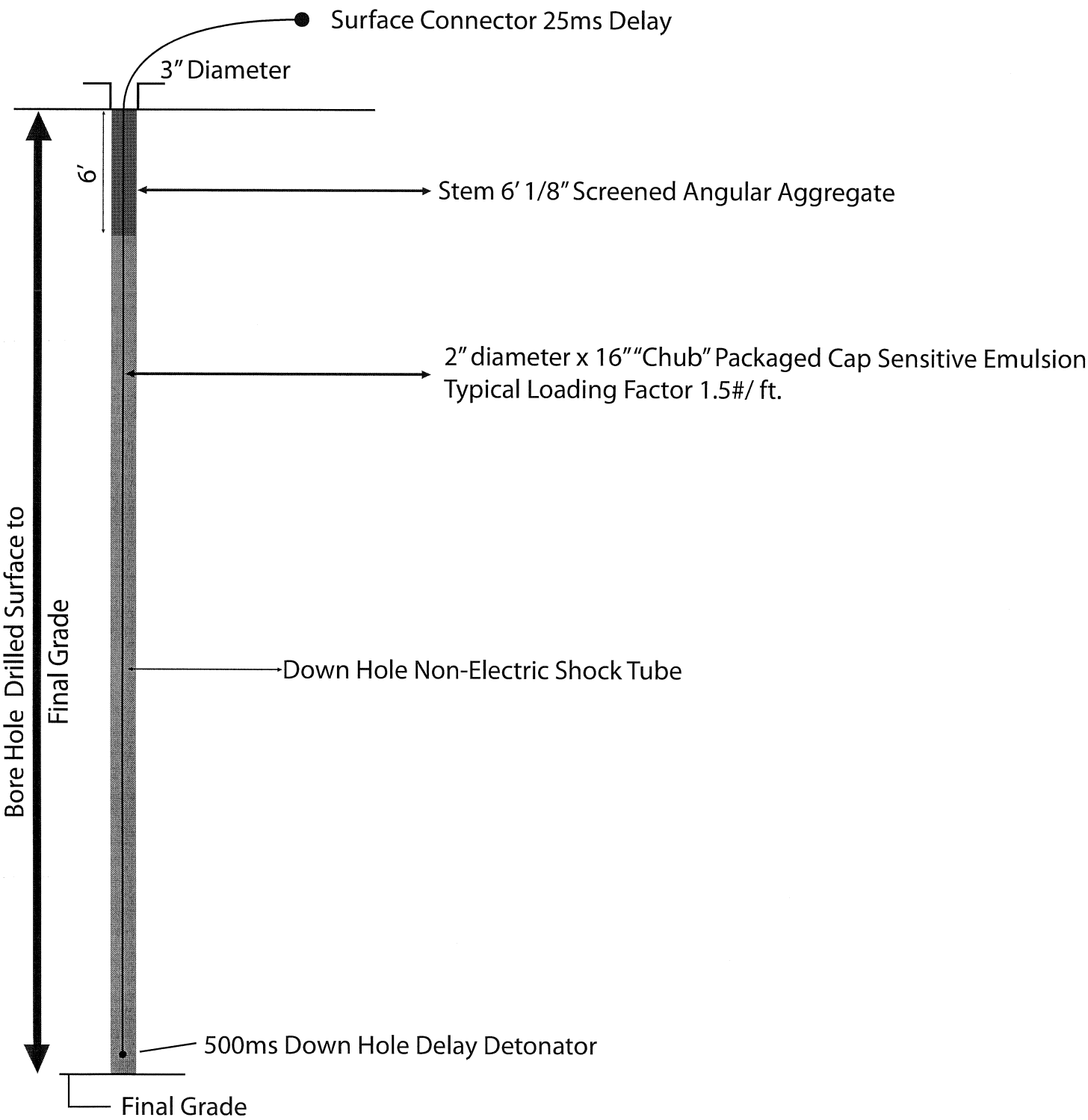
Blast Design 3



Typical Presplit Loading Diagram



Typical 3" Diameter Trim Blast Bore Hole



Typical 5" Diameter Production Blast Bore Hole

